NIGHT LIGHT AND POWER SUPPLY CIRCUIT FOR LED

ABSTRACT OF THE DISCLOSURE

In one embodiment, the present invention pertains to a night light assembly which plugs directly into an electrical wall receptacle to provide a beam of light that can be directed along different paths. The assembly comprises a housing having a plug with projecting blade contacts for insertion into a wall receptacle and a light sensor for automatically controlling the activation and de-activation of the lamp of the nightlight. A cover member rotatably supported by the housing includes a lens, a low wattage lamp, a support member, and a lamp retaining member. The low wattage lamp in the cover assembly is coupled, via sliding contacts, to the blade contacts in the base housing. This arrangement allows the cover and the lamp to be rotated as a unit relative to the base housing without limitation. The lamp retaining member is non-rotatably coupled to the cover and is rotatably engaged by a retaining member fixed to the housing member. The longitudinal axis of the low wattage lamp located in the lamp retaining member is aligned along the rotational axis of the lens in the cover to permit both direct and reflected light to pass through the lens in the cover without being obstructed by the base of the lamp. The disclosed assemblage is a new improved nightlight of simple design which provides increased light and can be manufactured and sold at relatively low cost. The low wattage lamp used in the nightlight can be either an incandescent bulb or a light emitting diode (LED) such as an ultrabright white LED either as a single bulb or a cluster of 2 or more bulbs. A photo sensitive circuit can be provided to automatically energize the incandescent bulb or the LED during low light conditions. When an LED is use as the light source, the LED is energized by a new improved power supply that is both simple in design and more efficient in operation than the standard power supply circuit used for LED's.